



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,610	09/09/2006	Coenraad Jan Spaans	8459.013.US0000	1373
77213	7590	03/19/2009	EXAMINER	
Novak Druce + Quigg, LLP 1300 Eye Street, NW, Suite 1000 Suite 1000, West Tower Washington, DC 20005			FREEMAN, JOHN D	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			03/19/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,610	Applicant(s) SPAANS ET AL.	
	Examiner John Freeman	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6 and 8-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6 and 8-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9 January 2009 has been entered.

Claim Objections

2. Claims 1, and 11-23 objected to because of the following informalities:
- i. Claims 1, 18, and 19 recite "iso-phthalic acid", but should read "isophthalic acid".
 - ii. Claims 5, 6, and 9-23 should start with "A" or "The" as necessary for antecedent basis, e.g. claim 5 can read "The sheet material according to claim 1..."
 - iii. Claim 14 recites "Method container according to claim 11". This appears to be a typographical error, where Applicant intends for a "metal container". The examiner interprets the claim to be directed toward the article.
3. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 5, 8-18, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Majima et al. (WO 2001/092417) in view of Fujii et al. (US 2002/0045051) and Yabe et al. (US 4,362,775).

5. The examiner notes Majima WO '051, which is published in Japanese, has a national stage entry, which resulted in US 6,780,482. The examiner uses US '482 as an English-translation. All references herein refer to US '482.

Art Unit: 1794

6. Regarding claims 1 and 18:

7. Majima et al. (hereafter Majima) disclose metal sheets having a polyester film thereon (col 1 ln 8-10). The film comprises a blend of PBT and PET (col 4 ln 16-28). Majima teaches a PBT concentration of 40-80% by weight (col 4 ln 25). A polyester-based adhesive may attach the film to the metal sheet (col 11 ln 51-55). Further layers may be provided on the surface of the film (col 11 ln 56-60).

8. Majima is silent with regard to an adhesive layer consisting of a modified PET and an outer layer consisting of PET having a glass transition temperature of greater than 70°C and the thickness of the barrier layer.

9. Fujii et al. (hereafter Fujii) disclose a polyester film coating for metal beverage cans [0001]. The film provides good adhesion to the metal surface [0010-11]. Fujii defines a layer B that adheres to the metal [0012]. Layer B preferably comprises PET modified with isophthalic acid [0021].

10. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use an adhesive layer of PET modified with isophthalic acid to provide good adhesion to the metal surface and prevent delamination.

11. Yabe et al. (hereafter Yabe) teaches a PET outer layer having good formability and providing good corrosion resistance to a metal sheet (col 2 ln 40-59). PET intrinsically has a glass transition temperature above 70°C and a melting point above 240°C.

12. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use such an outer layer in conjunction with Majima's film to improve the corrosion resistance of the composite while maintaining formability.

13. Regarding claim 5:

14. Majima teaches a PBT concentration of 40-80% by weight (col 4 ln 25). These values overlap with those ranges described by Applicant. As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Art Unit: 1794

15. Regarding claims 8-10, and 21-23:

16. Majima discloses examples of films 25 μm in total thickness (col 16 ln 56) where the adhesive can be less than 1 μm in thickness (col 11, ln 50-51). Yabe states the thickness of the outer PET layer can be varied as needed (col 7 ln 6-9). It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)).

17. At the time of the invention, it would have been obvious to one of ordinary skill in the art to vary the thicknesses of the layers, including the presently claimed thicknesses, to provide a film having good adhesion, good barrier properties, and good formability.

18. Regarding claims 11-14:

19. Majima makes a container from the metal sheet (col 1 ln 10-15). Many types of metal are suitable, including steel treated with electrolytic chromium (col 11 ln 38-45).

20. Regarding claims 15-17:

21. Majima discloses extruding the film (col 16 ln 41-46). Merely applying one layer onto a substrate before other layers of a multilayer structure was a well-known process at the time of the invention. At the time of the invention, it would have been an obvious variation to one of ordinary skill in the art to apply the adhesive layer before the other layers to, for example, ensure the heat involved does not adversely affect the other layers.

Art Unit: 1794

22. Claims 1, 5, 8-17, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Majima et al. (WO 2001/092417) in view of Kimura et al. (US 5,922,164) and Yabe et al. (US 4,362,775).

23. The examiner notes Majima WO '051, which is published in Japanese, has a national stage entry, which resulted in US 6,780,482. The examiner uses US '482 as an English-translation. All references herein refer to US '482.

24. Regarding claims 1, 19, and 20:

25. Majima et al. (hereafter Majima) disclose metal sheets having a polyester film thereon (col 1 ln 8-10). The film comprises a blend of PBT and PET (col 4 ln 16-28). Majima teaches a PBT concentration of 40-80% by weight (col 4 ln 25). A polyester-based adhesive may attach the film to the metal sheet (col 11 ln 51-55). Further layers may be provided on the surface of the film (col 11 ln 56-60).

26. Majima is silent with regard to an adhesive layer consisting of a modified PET and an outer layer consisting of PET having a glass transition temperature of greater than 70°C and the thickness of the barrier layer.

27. Kimura et al. (hereafter Kimura) disclose a polyester film which has excellent adhesion to a metal sheet (col 1 ln 9-15). Kimura teaches a blend of a polyester having a high melting point and a polyester having a low melting point improves the heat resistance of the film, and inhibits formation of pin holes (col 9 ln 22-27). Layer (I), which is in contact with the metal, comprises such a blend. A low-melting polyester includes cyclohexane dimethanol-copolymerized polyethylene terephthalate (col 10 ln 1-10). Kimura teaches the high melting polyester should have a melting point not below 210°C (col 9 ln 33-37). Kimura also discloses polyethylene terephthalate, which intrinsically has a melting point of 210°C, are preferred (col 2 ln 55-60).

28. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use an adhesive layer of PET blended with PET modified with cyclohexane dimethanol to provide good adhesion to the metal surface and inhibit formation of pin holes in the film.

29. Yabe et al. (hereafter Yabe) teaches a PET outer layer having good formability and providing good corrosion resistance to a metal sheet (col 2 ln 40-59). PET intrinsically has a glass transition temperature above 70°C and a melting point above 240°C.

Art Unit: 1794

30. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use such an outer layer in conjunction with Majima's film to improve the corrosion resistance of the composite while maintaining formability.

31. Regarding claim 5:

32. Majima teaches a PBT concentration of 40-80% by weight (col 4 ln 25). These values overlap with those ranges described by Applicant. As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

33. Regarding claims 8-10, and 21-23:

34. Majima discloses examples of films 25 μm in total thickness (col 16 ln 56) where the adhesive can be less than 1 μm in thickness (col 11, ln 50-51). Yabe states the thickness of the outer PET layer can be varied as needed (col 7 ln 6-9). It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)).

35. At the time of the invention, it would have been obvious to one of ordinary skill in the art to vary the thicknesses of the layers, including the presently claimed thicknesses, to provide a film having good adhesion, good barrier properties, and good formability.

Art Unit: 1794

36. Regarding claims 11-14:

37. Majima makes a container from the metal sheet (col 1 ln 10-15). Many types of metal are suitable, including steel treated with electrolytic chromium (col 11 ln 38-45).

38. Regarding claims 15-17:

39. Majima discloses extruding the film (col 16 ln 41-46). Merely applying one layer onto a substrate before other layers of a multilayer structure was a well-known process at the time of the invention. At the time of the invention, it would have been an obvious variation to one of ordinary skill in the art to apply the adhesive layer before the other layers to, for example, ensure the heat involved does not adversely affect the other layers.

40. Claims 1, 5, 6, 8-18, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara et al. (US 2002/0102419) in view of Fujii et al. (US 2002/0045051) and Yabe et al. (US 4,362,775).

41. Regarding claims 1 and 18:

42. Kawahara et al. (hereafter Kawahara) disclose metal sheets having a polyester film [0001]. The film comprises a blend of PET (A) and PBT (B) [0016]. Kawahara teaches a PBT concentration of 30-90% by weight [0019]. The film may comprise additional layers [0067].

43. Kawahara is silent with regard to an adhesive layer consisting of a modified PET and an outer layer consisting of PET having a glass transition temperature of greater than 70°C and the thickness of the barrier layer.

44. Fujii et al. (hereafter Fujii) disclose a polyester film coating for metal beverage cans [0001]. The film provides good adhesion to the metal surface [0010-11]. Fujii defines a layer B that adheres to the metal [0012]. Layer B preferably comprises PET modified with isophthalic acid [0021].

45. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use an adhesive layer of PET modified with isophthalic acid to provide good adhesion to the metal surface and prevent delamination.

Art Unit: 1794

46. Yabe et al. (hereafter Yabe) teaches a PET outer layer having good formability and providing good corrosion resistance to a metal sheet (col 2 ln 40-59). PET intrinsically has a glass transition temperature above 70°C and a melting point above 240°C.

47. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use such an outer layer in conjunction with Kawahara's film to improve the corrosion resistance of the composite while maintaining formability.

48. Regarding claims 5 and 6:

49. Kawahara teaches a PBT concentration of 30-90% by weight [0019].

50. Regarding claims 8-10, and 21-23:

51. Kawahara teaches films having a thickness of 15-30 µm [0068]. Yabe states the thickness of the outer PET layer can be varied as needed (col 7 ln 6-9). It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)).

52. At the time of the invention, it would have been obvious to one of ordinary skill in the art to vary the thicknesses of the layers, including the presently claimed thicknesses, to provide a film having good adhesion, good barrier properties, and good formability.

53. Regarding claims 11, 12, and 14:

54. Kawahara directs the invention toward metal cans for beverages [0003]. Kawahara discloses aluminum metal [0017].

Art Unit: 1794

55. Regarding claims 15-17:

56. Kawahara discloses extruding the film [0063]. Merely applying one layer onto a substrate before other layers of a multilayer structure was a well-known process at the time of the invention. At the time of the invention, it would have been an obvious variation to one of ordinary skill in the art to apply the adhesive layer before the other layers to, for example, ensure the heat involved does not adversely affect the other layers.

57. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara et al. (US 2002/0102419) in view of Fujii et al. (US 2002/0045051) and Yabe et al. (US 4,362,775) as applied to claims 1, 5, 6, 8-18, and 21-23 above, and further in view of Majima et al. (WO 2001/092417).

58. The examiner notes Majima WO '051, which is published in Japanese, has a national stage entry, which resulted in US 6,780,482. The examiner uses US '482 as an English-translation. All references herein refer to US '482.

59. Kawahara combined with Fuji and Yabe disclose a metal sheet coated with a multilayer polyester film as previously explained.

60. The references are silent with regard to electro-chromium coated steel.

61. Steel and aluminum sheets are generally interchangeable parts. One of ordinary skill would recognize steel provides higher strength than aluminum. For example, Majima discloses polyester film coatings for steel or aluminum sheets, including electro-chromium coated steel sheets (col 11 ln 38-45).

62. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the film of Kawahara combined with Fuji and Yabe in conjunction with ECCS sheets to provide protective properties to such sheets.

Art Unit: 1794

63. Claims 1, 5, 8-17, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara et al. (US 2002/0102419) in view of Kimura et al. (US 5,922,164) and Yabe et al. (US 4,362,775).

64. Regarding claims 1, 19, and 20:

65. Kawahara et al. (hereafter Kawahara) disclose metal sheets having a polyester film [0001]. The film comprises a blend of PET (A) and PBT (B) [0016]. Kawahara teaches a PBT concentration of 30-90% by weight [0019]. The film may comprise additional layers [0067].

66. Kawahara is silent with regard to an adhesive layer consisting of a modified PET and an outer layer consisting of PET having a glass transition temperature of greater than 70°C and the thickness of the barrier layer.

67. Kimura et al. (hereafter Kimura) disclose a polyester film which has excellent adhesion to a metal sheet (col 1 ln 9-15). Kimura teaches a blend of a polyester having a high melting point and a polyester having a low melting point improves the heat resistance of the film, and inhibits formation of pin holes (col 9 ln 22-27). Layer (I), which is in contact with the metal, comprises such a blend. A low-melting polyester includes cyclohexane dimethanol-copolymerized polyethylene terephthalate (col 10 ln 1-10). Kimura teaches the high melting polyester should have a melting point not below 210°C (col 9 ln 33-37). Kimura also discloses polyethylene terephthalate, which intrinsically has a melting point of 210°C, are preferred (col 2 ln 55-60).

68. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use an adhesive layer of PET blended with PET modified with cyclohexane dimethanol to provide good adhesion to the metal surface and inhibit formation of pin holes in the film.

69. Yabe et al. (hereafter Yabe) teaches a PET outer layer having good formability and providing good corrosion resistance to a metal sheet (col 2 ln 40-59). PET intrinsically has a glass transition temperature above 70°C and a melting point above 240°C.

70. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use such an outer layer in conjunction with Kawahara's film to improve the corrosion resistance of the composite while maintaining formability.

Art Unit: 1794

71. Regarding claims 5 and 6:

72. Kawahara teaches a PBT concentration of 30-90% by weight [0019].

73. Regarding claims 8-10, and 21-23:

74. Kawahara teaches films having a thickness of 15-30 μm [0068]. Yabe states the thickness of the outer PET layer can be varied as needed (col 7 ln 6-9). It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)).

75. At the time of the invention, it would have been obvious to one of ordinary skill in the art to vary the thicknesses of the layers, including the presently claimed thicknesses, to provide a film having good adhesion, good barrier properties, and good formability.

76. Regarding claims 11, 12, and 14:

77. Kawahara directs the invention toward metal cans for beverages [0003]. Kawahara discloses aluminum metal [0017].

78. Regarding claims 15-17:

79. Kawahara discloses extruding the film (col 16 ln 41-46). Merely applying one layer onto a substrate before other layers of a multilayer structure was a well-known process at the time of the invention. At the time of the invention, it would have been an obvious variation to one of ordinary skill in the art to apply the adhesive layer before the other layers to, for example, ensure the heat involved does not adversely affect the other layers.

Art Unit: 1794

80. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara et al. (US 2002/0102419) in view of Kimura et al. (US 5,922,164) and Yabe et al. (US 4,362,775) as applied to claims 1, 5, 8-17, and 19-23 above, and further in view of Majima et al. (WO 2001/092417).

81. The examiner notes Majima WO '051, which is published in Japanese, has a national stage entry, which resulted in US 6,780,482. The examiner uses US '482 as an English-translation. All references herein refer to US '482.

82. Kawahara combined with Kimura and Yabe disclose a metal sheet coated with a multilayer polyester film as previously explained.

83. The references are silent with regard to electro-chromium coated steel.

84. Steel and aluminum sheets are generally interchangeable parts. One of ordinary skill would recognize steel provides higher strength than aluminum. For example, Majima discloses polyester film coatings for steel or aluminum sheets, including electro-chromium coated steel sheets (col 11 ln 38-45).

85. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the film of Kawahara combined with Kimura and Yabe in conjunction with ECCS sheets to provide protective properties to such sheets.

Response to Arguments

86. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Freeman
Examiner
Art Unit 1794

/John Freeman/
Examiner, Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794